

AMENDMENTS TO THE CLAIMS

Claims 1-16 (cancelled)

Claim 17 (new): A method for predicting a human's capacity to metabolize a substrate of a CYP2D6 enzyme from the range of capacities in humans, which comprises:

identifying nucleotides at three or more polymorphic sites in a CYP2D6 flanking region in a strand of a human nucleic acid, and

predicting the capacity from the nucleotides identified at the three or more polymorphic sites.

Claim 18 (new): The method of claim 17, wherein the three or more polymorphic sites at positions in the CYP2D6 flanking region selected from the group consisting of positions -1496, -1338 and -590; positions -1496, -912 and -590; positions -1496, -1338 and -652; positions -1496, -912 and -652; positions -1496, -1338, -912 and -652; positions -1496, -1338, -912 and -590; positions -1496, -912, -652 and -590; and positions -1496, -1338, -912, -652 and -590.

Claim 19 (new): The method of claim 18, wherein the three or more polymorphic sites correspond to positions -1496, -1338, and -590.

Claim 20 (new): The method of claim 18, wherein the three or more polymorphic sites correspond to positions -1496, -912 and -590.

Claim 21 (new): The method of claim 18, wherein the three or more polymorphic sites correspond to positions -1496, -1338 and -652.

Claim 22 (new): The method of claim 18, wherein the three or more polymorphic sites correspond to positions -1496, -912 and -652.

Claim 23 (new): The method of claim 18, wherein the three or more polymorphic sites correspond to positions -1496, -1338, -912 and -652.

Claim 24 (new): The method of claim 18, wherein the three or more polymorphic sites correspond to positions -1496, -1338, -912 and -590.

Claim 25 (new): The method of claim 18, wherein the three or more polymorphic sites correspond to positions -1496, -912, -652 and -590.

Claim 26 (new): The method of claim 18, wherein the three or more polymorphic sites correspond to positions -1496, -1338, -912, -652 and -590.

Claim 27 (new): The method of claim 17, wherein the range of capacities is ultra extensive, extensive, intermediate and poor.

Claim 28 (new): The method of claim 17, wherein the range of capacities is between a metabolic ratio of less than 0.4 to a metabolic ratio of greater than 12.6.

Claim 29 (new): The method of claim 17, wherein the range of capacities is between a metabolic ratio of 0.03 to 236.

Claim 30 (new): The method of claim 17, which further comprises isolating the nucleic acid from the human.

Claim 31 (new): The method of claim 30, wherein the nucleic acid is DNA.

Claim 32 (new): The method of claim 31, wherein the DNA is single-stranded.